ELSEVIER

Volume 215, Numbers 1–2, March 1998

WEAR

Contents

A selection methodology for lubricating oils in cold metal forming processes 1
L. Lazzarotto, L. Dubar, A. Dubois, P. Ravassard, J.P. Bricout, J. Oudin

Surface deformation and formation of original element of wear particles in sliding friction 10
H. Mishina

Wheel flange/rail head wear simulation 18
S. Zakharov, I. Komarovsky, I. Zharov

Evaluation of the wear life of MoS_2-bonded-films in tribo-testers with different contact configuration 25
H. Kong, H.-G. Han, E.-S. Yoon, O.-K. Kwon, N.K. Myshkin

Wear behavior of Lanxide Al_2O_3/Al composite 34
J. Zhang, D. Zhu, L. Yang, S. Li

Friction and wear behaviors of the complexes of rare earth hexadecylate as grease additive 40
Z. Zhang, W. Liu, Q. Xue

Cavitation erosion of bainitic steel 46
G.B. Jiang, Y.K. Zheng, Y.Y. Yang, H.S. Fang

In-process measurement of surface roughness using light scattering 54
U. Persson

Analyses and design of a WC milling cutter with TiCN coating 59
Y.L. Su, S.H. Yao, C.S. Wei, C.T. Wu

A note on the construction of materials performance maps for resistance to erosion in aqueous slurries 67
M.M. Stack, N. Pungwiwat

Validation of the erosion map for spherical particle impacts on glass 77
M.A. Verspui, P.J. Slikkerveer, G.J.E. Skerka, I. Oomen, G. de With

An investigation of the tribological behaviour of a high-nitrogen Cr–Mn austenitic stainless steel 83
D.J. Mills, R.D. Knutsen

Tribology of the helical scan head tape interface 91
V. Prabhakaran, S. Kyung Kim, F.E. Talke

Tribological properties of transition metal carbosulfides and carbosulfide-metal composites 98
P. Wally, M. Ueki

Scuffing and lubricant film breakdown in FZG gears
Part I. Analytical and experimental approach 104
J. Castro, J. Seabra

Scuffing and lubricant film breakdown in FZG gears
Part II. New PV scuffing criteria, lubricant and temperature dependent 114
J. Castro, J. Seabra

Optimization of compound layer thickness for wear resistance of nitrocarburized H11 steels 123
N. Krishnaraj, P. Bala Srinivasan, K.J.L. Iyer, S. Sundaresan

Towards prediction of flux effects in powder blasting nozzles 131
F.H. in't Veld, P.J. Slikkerveer

Elsevier Science S.A.

Normal load, slip rate and roughness influence on the PMMA dynamics of sliding
2. Characterisation of the stick–slip phenomenon 137
S. Bouissou, J.P. Petit, M. Barquins

Wear of railway contact wires against current collector materials..... 146
D.H. He, R.R. Manory, N. Grady

Surface analysis of boundary-lubricated spherical roller thrust bearings..... 156
U. Olofsson, S. Dizdar

The tribochemical mechanism of the borate modified by N-containing compound as oil additive 165
Y. Qiao, W. Liu, S. Qi, Q. Xue, B. Xu, S. Ma

Dry wear and friction properties of δ-Al_2O_3 short fiber reinforced Al–Si (LM 13) alloy metal matrix composites 170
H. Akbulut, M. Durman, F. Yilmaz

The relative erosivity of limestone, dolomite and coal samples from an operating boiler 180
B.-Q. Wang, K. Luer

A study of rolling-contact fatigue of bearing steel coated with physical vapor deposition TiN films: Coating response to cyclic contact stress and physical mechanisms underlying coating effect on the fatigue life 191
I.A. Polonsky, T.P. Chang, L.M. Keer, W.D. Sproul

Revision to the concept of equilibrium concentration of particles in lubrication system of machines 205
L. Yan, X. Youbai, Z. Fang, Y. Zhigang

Application of transient current measurements: evidence for galvanic corrosive wear of aluminum by a polyperfluoroether lubricant .. 211
J.T. Dickinson, S.C. Langford, W. Faultersack, H. Yoshisaki

Microstructural characterisation of the subsurface plastic zone formed during erosion of A356 Al alloy and composites..... 223
R.A. Saravanan, I. Samajdar, M.K. Surappa

Unlubricated friction and wear behaviour of zirconia ceramics 232
Y. Sun, B. Li, D. Yang, T. Wang, Y. Sasaki, K. Ishii

Wear and scuffing of austempered ductile iron gears 237
L. Magalhães, J. Seabra

Simulation of asperity plowing in an atomic force microscope
Part I: Experimental and theoretical methods 247
L.G. Hector Jr., S.R. Schmid

Simulation of asperity plowing in an atomic force microscope
Part II: plowing of aluminum alloys..... 257
S.R. Schmid, L.G. Hector Jr.

On the finishing of Si_3N_4 balls for bearing applications 267
M. Jiang, R. Komanduri

Author Index of Volume 215..... 279

Subject Index of Volume 215 281

List of Keywords..... 285

The publisher encourages the submission of articles in electronic form thus saving time and avoiding rekeying errors. A leaflet describing our requirements is available from the publisher upon request. For more information see http://www.elsevier.nl.locate/wear

CONTENTS DIRECT

ContentsDirect, the *free* e-mail alerting service, delivers the table of contents for this journal directly to your PC, prior to publication. The quickest way to register for **Contents Direct** is via the Internet at: **http://www.elsevier.nl/locate/ContentsDirect**. If you don't have access to the Internet you can register for this service by sending an e-mail message to cdsubs@elsevier.co.uk -specifying the title of the publication you wish to register for.